

The diagram illustrates the AHR signaling pathway. In the cytoplasm, AHR can be degraded by the Ubiquitin-Proteasome System (UPS). Alternatively, AHR forms a complex with HSP90 and XAP1. This complex can translocate into the nucleus, where it forms a complex with ARNT. The AHR/ARNT complex then binds to the Dioxin Responsive Element (DRE) on DNA, leading to the transcription of target genes. The AHR/HSP90 complex in the cytoplasm can also be degraded by the UPS or form a complex with XAP1 and HSP90. The AHR/HSP90/XAP1 complex can also be degraded by the UPS.

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Treatment	Mechanism of Redox Control
Mannitol	Scavenges hydroxyl radical
Ebselen	Scavenges peroxynitrite and superoxide anion
NOHA	Generates nitric oxide
1400W	Inhibits inducible nitric oxide
N-Acetyl Cysteine	Increases intracellular glutathione levels
PDTC	Scavenges hydroxyl radical and superoxide anion
Glucosamin	?

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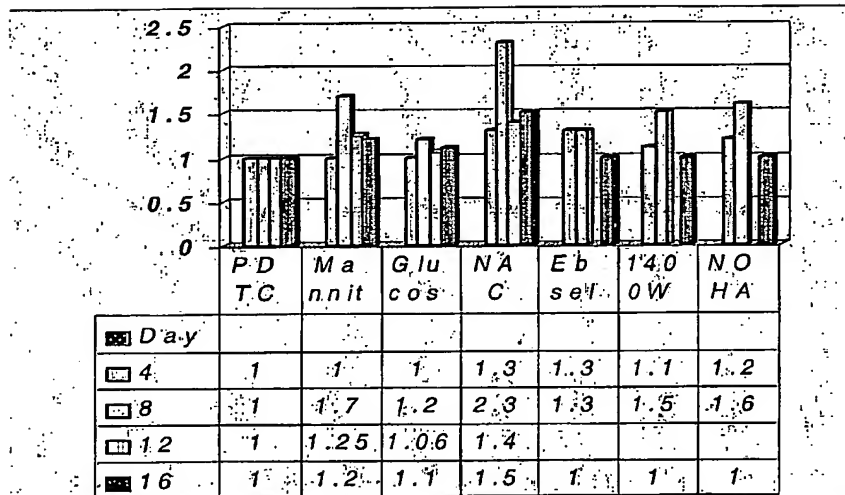


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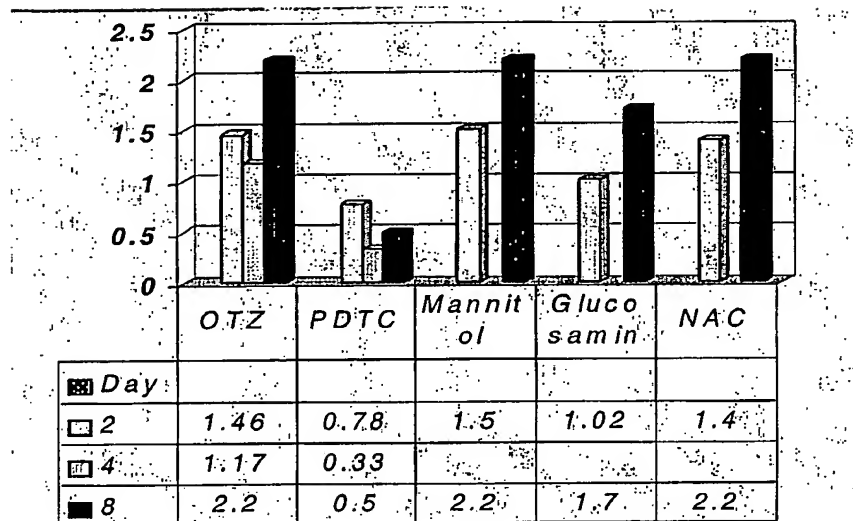


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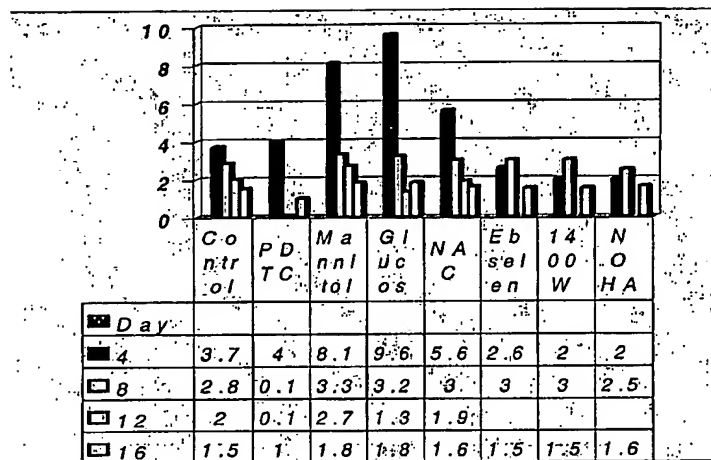


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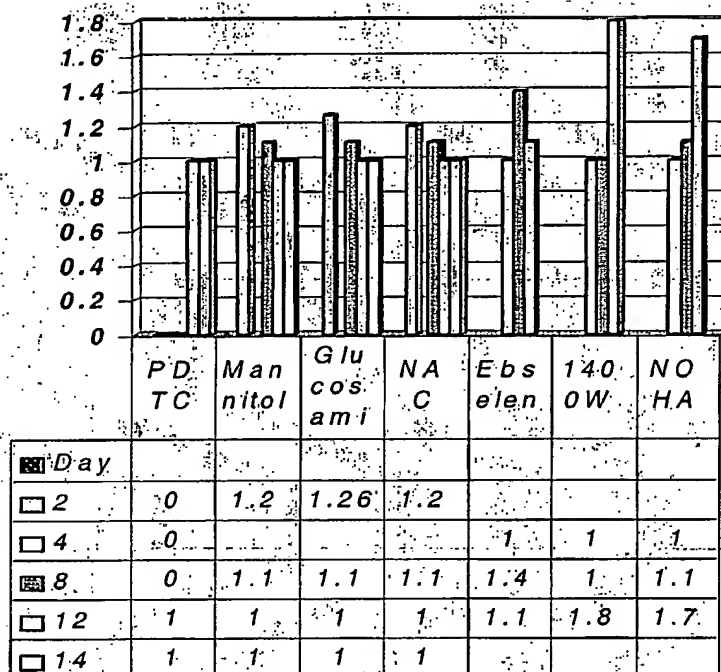


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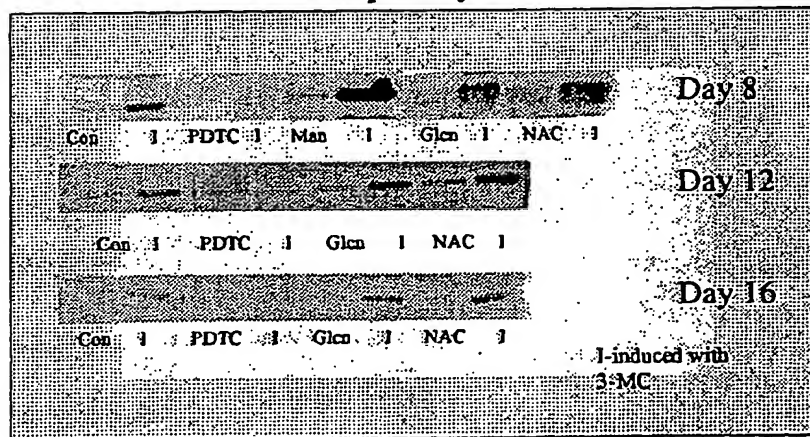
Western Blotting for CYP1A1 in 3-MC treated hepatocytes

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Day	untreated	OTZ	Mannitol	NAC	SOD	Toco-S	Toco-S+O-Trolox	NMA
2	1	1.5	1.7	1.5				
4	1	1.3	1.4	1	1.3	1.4		1.2
6	1	1.9	1.1	1.1	1.5	1.3	1.5	1
8	1							
10	1	2.6	1.2	1				
14	1	3	2	1	4	2.6		1.8
18	1	3				1	1.5	
20	1	1.4	1	1.3		1.3	1	1
22	1	1.5				1	1.1	
24	1	1.8	1.7			2.4		
34	1	1.7	1.2	1.4	1.7	2.1	1.1	
36	1	1.3				1.3		
44	1	1.6	1.5	1.3	1.1	1.3		1.2
60	1	1.8	1	1	2	1	1.7	1.9
72	1	2.8	1.8	1		1.7	1	

Figure 8.2/10

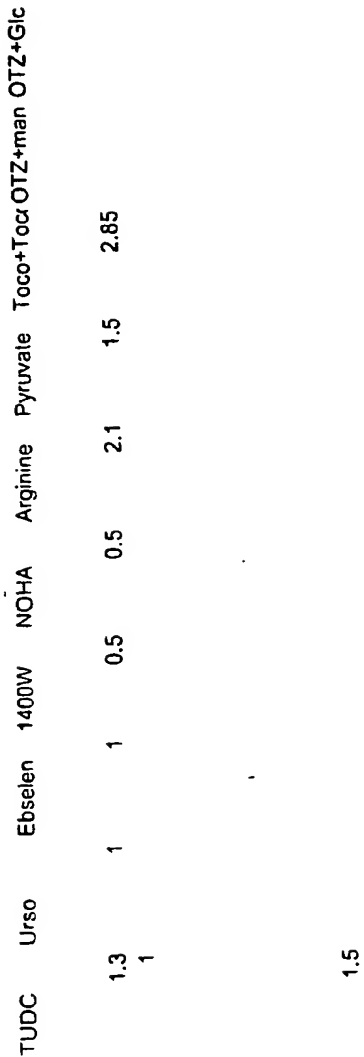
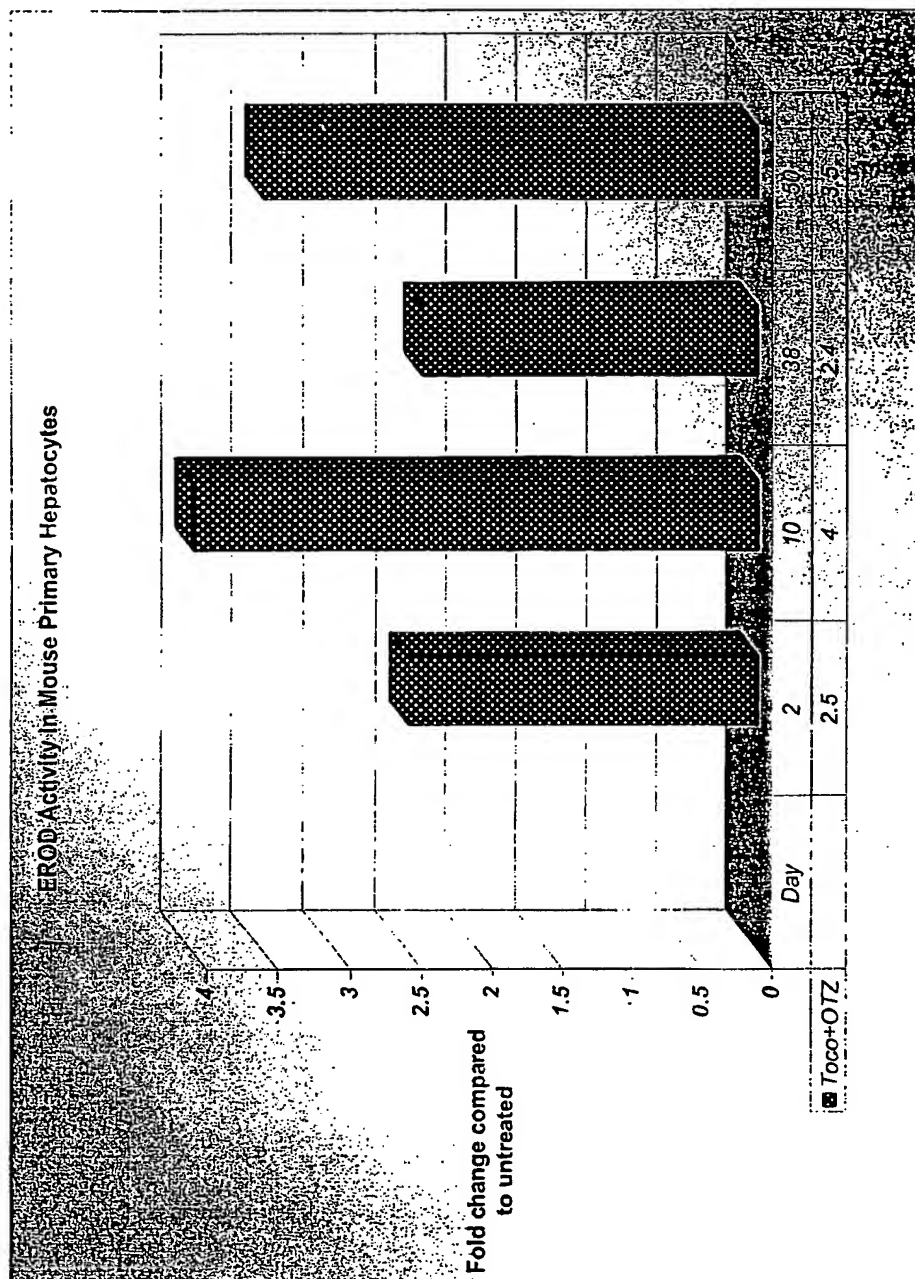


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